

COUNTY OF WIGTOWN.

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SIXTH ANNUAL HEALTH REPORT.

YEAR 1896.

BY

R. W. D. MACMARTIN CAMERON,
M.D., D.Sc., (EDIN.)

Medical Officer of Health for the Counties of Wigtown & Kirkcudbright.

NEWTON-STEWART :

PRINTED AT THE "GALLOWAY GAZETTE" OFFICES.

1897.



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TO THE COUNTY COUNCIL OF
WIGTOWNSHIRE.

MY LORDS AND GENTLEMEN,—

I have the honour of presenting to you
my Report on the Health of the County for the year 1896 as
prepared for the Local Government Board.

I am,

Your obedient Servant,

R. W. D. MACMARTIN CAMERON.

PUBLIC HEALTH OFFICE, NEWTON-STEWART,

8th March, 1897.

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SANITARY ORGANISATION AND PROGRESS.

Among the most important directions in which my energies were engaged during the year was in an effort protracted but successful in the end, to introduce into the sanitary administration and sanitary work of the County some much needed improvements in method and system. New Bye-laws (see Appendix), as recommended in my report for 1895, have been drawn up and a re-organisation has been effected which will lead to the prompt visiting by the Sanitary Inspector of premises where infectious disease has been ascertained to exist, and give some assurance that in future such premises are duly inspected for nuisances, and disinfected when the illness terminates or the case is removed to hospital. School Boards will be notified of all cases of infectious disease, so that they can prevent the attendance at school of children from infected households until a doctor's certificate of safety is produced, and the Medical Officer will be apprised of all steps which are taken by the Sanitary Inspector and the inquiries made by him whenever a case of infectious disease is notified. Elsewhere these are the very commonplaces of sanitary routine. Their importance is obvious, and this, I am glad to say, the County Local Authorities have now fully recognised, belated and tardy though their action has been.

But there are not wanting signs that in all sanitary respects the County may be expected very soon, if not to forge ahead of other Counties, at least to get into line with them. In the Upper district the Infectious Disease (Notification) Act was adopted, and came into force on the 1st of March, 1896. Over the whole County a uniform system of notification now prevails, and the curious spectacle has disappeared of one District not only having the Act in force but adding Measles and Whooping Cough to the notifiable list, while the other District was content to leave the Act severely alone. The adoption of the Notification Act at once raises and brings into prominence the question of hospital accommodation. In this respect the Lower District is fully equipped, the new Joint Hospital at Newton-Stewart being now open and ready for the reception of patients ; and it remains for the Upper District to make suitable provision for the isolation

of such infectious cases as cannot, without some degree of public danger, be treated at home.

Dairy inspection is a thing that requires attention, and, at a time when the large towns like Dundee are agitating for powers to send their officers into the Counties to make inspections for themselves, it behoves our rural administrators all the country over to see to it that their house is in order. Regulations under the Dairies, Cowsheds, and Milkshops Order were drawn up and passed by the Lower District Committee. They are of much the same tenor as those for the Upper District and the Scottish Counties generally.

Simple instructions (see Appendix) for the guidance of householders and others in the presence of infectious disease have been drawn up by the Medical Officer and approved by the Local Authorities, and a copy will be left by the Sanitary Inspector in each house he visits. New notification forms have been issued to all the Medical Practitioners in the County, in which additional information on several points of importance is solicited as a favour; and to this request they are giving a most generous response. The Lower District Committee have taken vigorous action to prevent the long standing pollution of the River Cree, and the Burgh Commissioners of Newton-Stewart are embarking on a comprehensive and much required scheme of drainage and a thorough going system of scavenging, which, when completed and in working order, will add greatly to the attractiveness of the town and the health of the people.

Altogether the record of the year has been a notable one, and augurs well for future sanitary progress in the County.

NOTIFICATION OF INFECTIOUS DISEASES.

As regards Scarlet Fever at least, 1896 was distinctly an epidemic year, *i.e.*, a year in which, for some reason or other not well understood, infectious disease, when it once appears, tends to spread like wild fire. As will be seen by a glance at the following figures, Scarlet Fever constituted the bulk of the cases. The tendency of this disease to recur in great waves, at uncertain intervals, generally every three or four or five years, is a well-known, although as yet more or less inexplicable phenomenon. It is much the same with Measles; and to some extent with Diphtheria also.

No question is more embarrassing than the often asked one, "What is the meaning of it ? How do you account for it ?" In part it is due to an excess of carelessness ; but not wholly. Ancient and mediæval philosophers had a convenient way of satisfying the curious by referring epidemics and such disagreeable events to the wrath of the gods or to some untoward conjunction of the planets or malign influence of the stars ; and the thing was settled. The modern philosopher cannot go much further ; but, remembering that this is an age of compulsory education and attenuated faith, he keeps the planets and gods out of sight and talks meteorology and bacteria ; which comes to much the same thing. All modern hygienic science is in essence but an elaborate long drawn out exposition of the fact that if we are to keep clear of epidemic disease and other ailments as well there are gods to whom we must offer up sacrifices and whom we must propitiate—foremost among them the god of knowledge and the god of cleanliness. These gods our mediæval ancestors knew not, or despised, wherefore they incurred the wrath which hurled down "judgments" upon them in the form of plagues and pestilences, that swept them off in millions. Modern science has shown how these evils can be combated, or even avoided altogether. It holds up the brazen serpent to the multitude, as did Moses in the wilderness, and if the people will not look, if they refuse or neglect to "wash and be clean," or put their house in order, or hearken to the voice of wisdom, then they need expect nothing else than that judgment will overtake them as surely as of old. Witness the recent Smallpox epidemic at Gloucester caused by persistent and wilful disregard of vaccination ; the Cholera two or three years ago at Hamburg, due to drinking the imperfectly filtered sewage polluted water of the Elbe ; and the present terrible plague at Bombay from overcrowding, dirt, and general sanitary neglect.

The smaller and less deadly epidemics to which we in this country are more or less accustomed, cannot be regarded as an altogether unmitigated evil, if they serve as a spur to sanitary effort, and so keep at bay the frightful scourges to which we are now happily strangers. It is satisfactory to note, from their steadily diminishing mortality, that upon the whole these unwelcome reminders of our sanitary duty fall year by year with a gentler and gentler touch.

The sum total of notifications received during the year was 281, apportioned as follows :—

UPPER DISTRICT.

(Notifications for ten months only, viz., from 1st March to 31st December.)

DISEASE.	NOTIFICATIONS.				DEATHS.
Diphtheria, ...	..	10	...	...	5
Membranous Croup, ...	...	2	...	...	0
Erysipelas, ...	...	3	...	...	0
Scarlet Fever, ...	...	59	...	...	2
Enteric Fever, ...	...	5	...	...	2
Puerperal Fever, ...	...	1	...	...	1
Total,		80			10

LOWER DISTRICT.

DISEASE.	NOTIFICATIONS.				DEATHS.
Diphtheria, ...	...	18	...	...	1
Membranous Croup	...	1	...	...	0
Erysipelas, ...	...	6	...	...	0
Scarlet Fever, ...	...	95	...	...	3
Enteric Fever, ...	...	6	...	...	0
Total,		126			4

BURGH OF NEWTON-STEWART.

DISEASE.	NOTIFICATIONS.				DEATHS.
Diphtheria, ...	...	1	...	...	0
Membranous Croup, ...	...	0	...	...	0
Erysipelas, ...	...	2	...	...	1
Scarlet Fever, ...	...	44	...	...	2
Enteric Fever, ...	...	28	...	...	0
Total,		75			3

The figures for the Lower District and Newton-Stewart are considerably in excess of those of the previous year ; but notwithstanding, the zymotic death rate for 1896 was little more than one half the rate for 1895.

SCARLET FEVER.

The great majority of the cases notified in the Lower District occurred as a short-lived epidemic in the village of Kirkeowan and round about. The disease was prevalent, off and on, in Newton-Stewart during the greater part of the year. There was also a short, but sharp, epidemic in Glenluce and vicinity. The

disease was, as a rule, of a very mild type. Out of 198 cases notified, only 7 proved fatal. This disease appears to be quite as prevalent in the country as ever it was, but its fatality of late years has diminished greatly.

DIPHTHERIA.

Twelve cases (including two of membranous croup) were notified from the Upper District. These were sporadic. For the Lower District 19 notifications were received. No fewer than 14 cases occurred in the village of Garliestown and neighbourhood, of which 10 were at Galloway House. The disease appears to have been carried to Galloway House, and transmitted to the occupants, by some of the servants of the house who had come in contact with it in the village. The outbreak was so sudden, and so many persons were seized in such a short space of time, that suspicion naturally fell on the milk supply. This, however, proved to be unfounded, and I am indebted to Dr Young of Garliestown for his kind assistance in sifting the matter.

TYPHOID FEVER.

In the Upper and Lower Districts there was no unusual prevalence of this disease. The cases notified numbered 5 (2 deaths) in the Upper, and 6 (no death) in the Lower District. In the Burgh of Newton-Stewart there occurred the very large number of 28. Of these, however, 22 were at the Industrial Home.

OUTBREAK OF TYPHOID AT INDUSTRIAL HOME.

The outbreak of typhoid at the Home presents some features of interest. There were in the institution about 50 young girls in all. On the 17th June I received intimation that 18 of them were down with typhoid fever. During the preceding week or so, each day, or every other day, they sickened in batches of 3 or 4. As soon as it became clear to the visiting physician that the illness was to be something worse than a passing gastric derangement, I visited the institution along with him. A general inspection there and then, followed later by a minute and searching examination of the drainage and other possible sources of mischief, revealed nothing to account for so serious an out-

break of disease. There was no history of typhoid having been brought to the institution by girls recently admitted. There was no typhoid in the town or neighbourhood at the time, and the milk supply was all right. There remained to be considered the water supply. This was from two sources, the gravitation supply of Newton-Stewart, and a private well beside the institution, the pump of which is in the laundry. Had the gravitation water been the cause, the outbreak of fever would not be confined, as in this instance, to one particular house, unless, indeed, the water had got contaminated on the premises. Of this there was no evidence, but as a precaution the cistern was thoroughly cleaned. The more clearly all other possible causes could be excluded, the greater became the suspicion that the well was the *fons et origo mali*. So it proved, although the evidence at this stage was merely presumptive. For downright duplicity, the well could have held its own with the juggling fiends that poor Macbeth complained of. To sight and taste the water was of good promise; it was bright, inviting, and very palatable, and was much in request as a drinking water. Lately it had been run upon more than usual, the people having become alarmed and disgusted by finding something dreadful (one or two little harmless slugs it turned out to be) come out of a tap from the gravitation water cistern. They were cautioned to cease using the laundry pump, except for washing purposes, until the water should be analysed. A sample was procured and gave excellent results. I reported that as far as chemical analysis went the water must be pronounced absolutely pure. With this supposed certificate of character the drinking of the water, which had been discontinued for a week or more, was incautiously resumed. Not another case of fever occurred for a fortnight after the first cases were reported. Then of a sudden another lot of the girls fell ill, and on the 3rd July I received notification of 4 new cases. It was now resolved that the use of the well water must cease entirely, and to make sure work the handle of the pump was removed. With this the epidemic came abruptly to an end. The disease was severe, and the illness of many of the patients protracted. That no deaths occurred, and no infection of the healthy by the sick, speaks eloquently for the skill and care with which the cases were treated and nursed.

Localised outbreaks such as the above convey most instructive hygienic lessons, for which reason they require and deserve to be chronicled with minuteness and care. Here we have an ordinary drystone well situated in the courtyard of a populous institution, within a few feet of the back door. One or more water-closet drains are in the immediate vicinity. True, the drains were tested and found correct, which is something. The old system of drainage had been, within the last few years, supplanted by a new and approved one. But there is no saying what old drains, or even cesspools, were allowed to remain. I had ocular demonstration that some old drain pipes, at least, had not been removed. The leaving of these *in situ*, when new drainage is laid or buildings are extended, is a common, dirty, and dangerous trick, householders and the public generally should beware of. So much for the situation of the well. But there is this other important circumstance, and it is that which I particularly wish to emphasise—it yielded water clear, tempting, palatable, and chemically pure, which was nevertheless proved, in a manner absolutely convincing, to contain the active poison of typhoid fever. The moral is that no well, *whatever analysis may say*, should be tolerated close to dwellings, with drains and other abominations about. Before this can be driven home, and lead to the better ordering of wells and their surroundings, it will take many such disagreeable lessons as this outbreak teaches; and so it is that many thoughtful persons are inclined to condemn the whole system of well supplies and urge on gravitation schemes, wherever possible. Often this is very desirable; but why should not wells at least have a decent chance of retrieving their character. They would do it if properly placed to begin with, and properly tended thereafter. If they cannot be so placed then abolish them.

WATERS AND WATER ANALYSIS.

Seventy samples of water were analysed during the year—35 from Wigtownshire, and 35 from the Stewartry. These include all waters which aroused the suspicion either of the sanitary officials or of medical practitioners. They also include various waters proposed for public supplies.

With the large number of samples analysed year by year nothing so far as potable waters are concerned should go very far

wrong in the two counties. They are in a manner insured against water-borne disease, and that for the trifling annual premium of a few glass instruments, a little gas, and some chemicals. It must be remembered, however, that the protection which a mere chemical estimate of the quality of waters can give is not by any means absolute. In deciding upon a water, analysis is a most useful adjuvant, but its indications can be interpreted and a correct judgment pronounced only when the chemist has a competent knowledge of the source of his sample, the topography and geology of the locality, the history of the water, and even the part of the country from which it was taken. Without such knowledge he may (1) condemn a water which is fundamentally good, or (2) certify as pure a water which is poisonous. The truth of both of these propositions has come home to me in my own experience. Of the latter a very notable instance occurred in the case of the well at the Industrial Home, Newton-Stewart, which was proved to demonstration to have caused a very serious outbreak of typhoid fever, notwithstanding that the physical characters of the water were perfect, and the analytical results everything that could be desired. No analyst could suspect, much less condemn, the water on chemical grounds, and yet the drinking of it poisoned 22 persons. This conveys a lesson the public are slow to learn, in spite of persistent preaching by the highest medical authorities. In his recent work on *Water and Water Supplies*, Dr Thresh, Medical Officer of Health for the County of Essex, has some pregnant remarks on water analysis, which I think it well to quote.* I have always made it a rule

* Whilst no single determination will enable the analyst to certify that a water is free from danger, or that it is so polluted as to be dangerous to health, the determination of several constituents may enable him to pronounce it to be polluted and dangerous, but will never justify him in certifying that it can be used absolutely without risk. As the freedom from all dangerous polluting material is the information usually sought from the analyst, it follows that if this cannot be ascertained by analysis, a chemical examination is in most cases quite useless. Where a water is known to be contaminated with sewage, or known to be liable to such pollution, an analysis is superfluous. When we also consider that many sources of supply are only subject to intermittent pollution, and that waters from the same reservoir or from the same well may vary considerably in composition, according to the depth from which the samples are taken, the character of the season, &c., it is obvious that the chemical examination of a water is a matter of comparatively trifling importance compared with the thorough examination of its source and an accurate knowledge of its history. Frequently waters are sent for analysis, and the analyst is wilfully kept in ignorance of their origin lest the information should prejudice his report, yet without this knowledge he is not justified in expressing an opinion whether any water can be used with safety.—*Water and Water Supplies*, by John C. Thresh, M.D., D.Sc. (Lond.)

either to inspect the source and surroundings of water supplies myself, or, failing this, to get as accurate particulars as I can before giving any dogmatic opinion on the quality of a water. Drinking out of a well placed close to a house where there are drains and water closets, cesspools, or privy pits, is always a risky business, whatever be the analysis of the water.

Again, as already stated, water which is essentially sound may be condemned by an analyst. Where this is most likely to happen is in the case of new wells. These, even when situated in places beyond reproach, are liable to a form of pollution which is not permanent but transitory, and passes away completely in a month or two. In my report for 1895, I entered at some length into this question. My observations were reproduced in various publications, and, from private communications I have received, and the results of further observation by myself and others, it may be taken as an established fact that for one, two, or three months after a new well has been constructed it may show such large amounts of free and albuminoid ammonia, indicative of organic matter in excess, as would inevitably, and often quite unnecessarily, lead to its condemnation and disuse. When the well is in a proper place the pollution is not to be set down to inherent bad quality of the water, but rather to something incidental to the digging and construction of the well—either pollution by the workmen and their implements, or, as Dr J. Dunlop (see *Public Health* for January, 1897) surmises as the result of experiment, by the materials, wood, concrete, &c., used in the construction. In illustration of this I will recount an experience. A well was sunk for the supply of a village in a very carefully selected locality, a flat, sandy peninsula at the junction of a burn with a river. Both streams were very pure, and the ground clean and far removed from any contaminating influence. Some time after the well was dug—a large square hole—I analysed a sample, which yielded considerably more than 100 parts per million, the usually accepted permissible maximum for a good water. This created no little astonishment among those who had chosen the site, more especially as both streams analysed at the same time gave something like 0.5 per million of albuminoid ammonia. It was resolved to have a second analysis, and this was done some two months later, when the albuminoid

ammonia was found to be no more than '02, evincing about as high a degree of purity as any well of the kind can show, or as need be expected of any water. All this was at a stage before any constructive work other than the digging of the hole had been carried out. The discrepancy between the first and second samples was for long a puzzle, but eventually the explanation was forthcoming, and it was very simple. It seems that the workmen had got hold of a deal plank from a neighbouring farm to stand upon, and that this plank, which had previously served as a gang-board for wheelbarrows on a dunghill, had been left in the bottom of the well, and was there when the first sample was taken. Before the second sample was drawn the collector had the plank removed and the well pumped dry, with the result that the albuminoid ammonia disappeared as stated almost to vanishing point. Had this little incident not come to light, and the plank lain in the well when the second sample was collected, very probably the water in that particular spot might come to be regarded as bad, or indifferent at least, whereas it was in reality one of the purest I have yet analysed. This is one way in which wells have undeservedly got a bad name, and the half page of print devoted to what may appear in itself a trivial thing will not be lost if it serves in any degree to remove a heresy that is fast growing around all well water supplies, and helps to reinstate these in the good graces of the public; or rather I should say that section of the public who would improve wells altogether off the face of the earth. For there is another by no means unimportant section whose affection for the old familiar pump or dip-hole is tender and touching (it probably has a reputation for making excellent tea or toddy), and who violently resent interference with their pet supply, even if it be no more than an order that the precincts of the well be kept decently clean.

VILLAGE WATER SUPPLIES.

Because analysts frequently find the water of new wells bad; because the Rivers Pollution Commissioners have put ordinary well waters on their black list and branded them dangerous; because in populous places the wells have become fouled and unfit for use, and, by reason of the proximity of drains, &c., and the hopeless pollution of the soil, have been the cause time, and again, of

Typhoid outbreaks, there are some sanitarians who think that every decrepit village must follow the lead of the towns and have its water "laid on." They little reek what must inevitably follow sooner or later. When water is laid on under pressure water closets begin to be set up. This necessitates a new drainage system for the old simple channels will no longer suffice. But the trouble and expense doesn't end here. Drains require constant tinkering and, if they are not to become dangerous, periodical renewal. And now that all over the country Local Authorities are beginning to assert their powers under the Rivers Pollution Act, towns which embarked on water and drainage schemes are finding to their cost and chagrin that they must give up "the good old rule, the simple plan," of running their filthy sewage and trade waste into the nearest stream. Self-interest makes the townsman stick like a leech to free trade regardless of the havoc it has wrought upon agriculture and the farming interests generally, and the long suffering rustic, like the proverbial worm, is at last going to turn and refuse any longer to have his landscape marred, his health damaged, and his cattle and fish poisoned, that trade and commerce, in which he has no share and which have reduced him to the brink of ruin, may continue to flourish at his expense. "The country," says Dr Vivian Poore, "has made great sacrifices for the sake of the towns and gets nothing in exchange but foul water and smoke."

Gravitation water is extremely handy and saves a deal of trouble, and this is probably all that occurs at first to those who clamour for it. Later on the rate collector comes into prominence; and although the health of the community must always be the paramount consideration, still the element of cost should have its due weight in sanitary as in all other projects for the public welfare. In towns of any size gravitation water is a necessity of the times. The same may be said of villages ambitious of growing into towns; but these are probably well able to bear the expense of the elaborate drainage with, possibly, sewage works which must follow, and, if they are not, it will be to the interest of proprietors whose lands are likely to be feued to contribute handsomely to the cost. All things considered it is open to doubt whether small rural communities are not better off with a simple well supply, assuming of course that their wells are judiciously placed and

properly cared for. At any rate it is right they should know what is before them when they launch out on big water schemes.

Considering the extraordinary indifference displayed towards the proper conservancy of wells, the ill-chosen position which nine out of ten of them occupy, the piles of filth and rubbish which almost invariably collect about them, the slops which are thrown over them, the byres and pigstyes which are recklessly reared by their side, the wonder is not that an occasional one, or even a whole set now and then, gets contaminated, but that any at all yield water fit to drink. That many remain pure or tolerably so (although under the conditions mentioned danger is never absent) shows what a deal of abuse they can stand. If then it is possible, and it should nearly always be possible in little country villages, to place them in clean localities, and keep those localities clean, there should be no danger whatever in their use. The first sanitary requirement of a village—it is generally the very last thing thought of—is regular and thorough scavenging, so that no dirt is allowed to accumulate to become a nuisance, but is at once removed. This done the risk of well contamination would be greatly lessened. Any well improperly situated or found impure should be abolished and replaced by another in some grass land away from buildings or other possible contaminating influences. Water closets with all their drainage paraphernalia should be absolutely forbidden in any village whose water supply is from wells, or licensed only under stringent regulations. It cannot be too strongly insisted upon that when such contrivances as sewers, cesspits, and cesspools are placed anywhere near a well there is always present an element of danger which no constructive ingenuity can avert. On the other hand the simplest hole in a clean grass field away from sources of pollution will almost invariably yield water which may be drunk with the greatest confidence.

Such being my views and the reasons for them, I cannot regard with disfavour all effort by Local Authorities to improve water supplies in villages—the new well scheme at Glenluce for instance—by substituting good wells for bad ones. This has been done in several places in Galloway, and with very good results, and it has yet to be shown that villages so supplied are more unhealthy than those which have gone in for expensive gravitation schemes.

LIST OF SAMPLES ANALYSED.

1. Ardwell Estate (per Mr M'Garva). Well. Bad.
2. Isle-of-Whithorn. Proposed supply (Mr Martin). Well. Very good.
- *3. Glasnick. Well. Bad.
4. Portpatrick. Source unknown. Fair.
5. New-Luce, north end. Spring. Very pure.
6. Do., south end. Spring. Very pure.
7. Kirkcowan Police Office. Well. Fair.
- *8. Newton-Stewart Industrial Home. Well very pure. (Outbreak of Typhoid Fever traced to this well. See account on page 11).
9. Rispan Farm, Whithorn. Well. Bad.
10. Clonyard, Kirkmaiden. Source unknown. Fair.
11. Lochnaw Estate. Well. Bad.
12. Corwar Onton. Well. Bad.
13. Do. Spring. Fair.
14. Rispan Farm. Second sample. Well. Bad.
15. Camrie Moor. Proposed supply for Glenluce. No. 1. Spring Very pure.
16. Proposed supply for Glenluce. Spring No. 2. Peaty.
17. Glenluce. Well. Suspicious.
18. Auchengalie Cothouse. Well. Bad.
19. Glenluce. Well. Fair.
20. }
21. { Samples from spring on Camrie Moor Proposed for supply
22. { of Glenluce. Too peaty for use.
23. }
24. Drummore School. Tank. Fair.
25. Do. Tap from tank. Fair.
26. Kirkcolm. Proposed new supply. Source unknown. Good.
27. Cascreugh Moor. Tolerable.
28. Gabsnout Burn. Proposed supply for Glenluce. (A former analysis showed considerable amount of peat). Good.
- *29. Glasnick. New well. Bad.
30. Barlockhart Fell. Spring. Good.
- *31. Leswalt. Well near graveyard. Fair.
32. Penninghame House. Tap water. Good.
33. Kirkcolm. Proposed new supply. Very pure.
34. Leswalt. Dip well. Good.
- *35. Leswalt. Pump. Second sample. Suspicious.

REMARKS.

Only those marked with an asterisk call for special comment. All waters found bad were condemned, and have been or are to be replaced by new supplies. Those noted suspicious will be further watched.

Well at Industrial Home, Newton-Stewart.—Sec page 11.

Glasnick New Well.—This was a newly sunk well intended to take the place of the old well near by, which was condemned. It yielded ammonia saline and organic in enormous quantities, chlorine 2 grains per gallon (normal) as opposed to 9 grains in

the old well. This new well would have stood self-condemned, even if the analysis had been favourable, by reason of its proximity to a cesspool and other possible and probable contaminating influences of a permanent character. An independent analysis of both wells was obtained by the proprietor, but apparently with no consolatory result, as, I understand, it is now intended to go for water further afield, a course I had advised from the first.

Leswalt Pump Well.—This well is somewhat suspiciously situated, being within 40 or 50 yards of a burying ground. The water was twice analysed, and though, by no means, of first rate quality it did not show any very decided signs of pollution. The graveyard is on a somewhat higher level than the well, but a study of the general configuration of the ground which, on the side of the well opposite to the graveyard, rises very high would indicate that the trend of the subsoil water is rather from that direction. Still, hard pumping might possibly draw from the graveyard, and the well, situated as it is, will no doubt continue, and not altogether unreasonably, to be regarded with a measure of suspicion and dislike by those who have to make use of it.

CERTIFICATES GRANTED.

As a basis for legal proceedings eight medical certificates were granted all having reference to nuisances in the Burgh of Newton-Stewart. Two certificates were granted relating to school closure or absence of scholars from school owing to infectious disease.

Two policemen were medically examined and certified fit for duty in the force.

HOSPITALS.

Reference has already been made to the opening of the new Joint Hospital at Newton-Stewart, which was built to serve the requirements of the Lower District of Wigtownshire, the Burgh of Newton-Stewart, and the Western District of the Stewartry—up to date no patients have been sent in. In my last report it was stated that the Upper District had a right to the use of eight beds in the hospital at Stranraer. A recent Sheriff Court decision, however, in another county makes it plain that the right to use the hospital is confined to the solitary parish of Inch.

or at most to the parishes of Inch and Leswalt. This is hardly to be regretted as the hospital, in its present condition, would be of very little service to the district.

FACTORY AND WORKSHOP ACTS.

As the result of complaints by H.M. Inspector of Factories, I visited and reported on various workshops in Newton-Stewart, Portwilliam, Kirkcowan, and Portpatrick. The complaints had reference either to overcrowding, or to the premises being kept in a dirty state, and I am bound to say that they were well founded. Nor is it difficult to realise, after a round of inspection how beneficent and necessary our factory and workshop legislation has been. As regards overcrowding Section 1 (1) of the Factory and Workshop Act of 1895 is so explicit as to leave no excuse to defaulters.

SECTION 1 (1)—A factory shall for the purpose of section three of the principal Act, and a workshop shall for the purpose of the law relating to public health, be deemed to be so overcrowded as to be dangerous or injurious to the health of the persons employed therein if the number of cubic feet of space in any room therein bears to the number of persons employed at once in the room a proportion less than two hundred and fifty, or, during any period of overtime, four hundred, cubic feet of space to every person.

Two other sections have important bearings on the public health and the duties of sanitary authorities :—

SECTION 3 (1)—Where notice of an act, neglect, or default is given by an inspector under section four of the principal Act to a sanitary authority, it shall be the duty of the sanitary authority (within one month) to inform the inspector of the proceedings taken in consequence of the notice.

SECTION 6 If any occupier of a factory, or workshop, or laundry, or of any place from which any work is given out, or any contractor employed by any such occupier, causes or allows wearing apparel to be made, cleaned, or repaired in any dwelling-house or building occupied therewith, whilst any inmate of the dwelling-house is suffering from scarlet fever or smallpox, then, unless he proves that he was not aware of the existence of the illness in the dwelling-house, and could not reasonably have been expected to become aware of it, he shall be liable to a fine not exceeding ten pounds.

SCHOOLS.

Several schools were closed for a time by reason of the prevalence of infectious disease among the scholars. In the *Code of Regulations for Day Schools, 1896*, certain new clauses bearing on the closing of schools and the recovery of grant have been introduced which demand the attention of school boards. These are as follows :—

ARTICLE 19 F—Where the Department are satisfied that by reason of a notice of the sanitary authority under Article 30 or any provision of an Act of Parliament requiring the exclusion of certain children, the average attendance has been seriously diminished, and that consequently a loss of annual grant would, but for this Article, be incurred, the Department have power to make a special grant not exceeding the amount of such loss in addition to the ordinary grant.

ARTICLE 30—The managers must at once comply with any notice of the sanitary authority of the district in which the school is situated or any two members thereof acting on the advice of the Medical Officer of Health, requiring them for a specified time, with the view to preventing the spread of disease or any danger to health likely to arise from the condition of the school either to close the school or to exclude any scholars from attendance, but after complying they may appeal to the Department if they consider the notice to be unreasonable.

BAKEHOUSES.

These are on the whole fairly well kept, although in some of them there is room for improvement ; and bakers are reminded that the statutory requirements as to white-washing, &c., apply not to walls only but to ceilings as well—a fact which some of them seem to forget.

VITAL STATISTICS.

POPULATION.

The population is estimated on the usual plan of assuming that the rate of increase or decrease observable during the last intercensal period has continued up to date.

	Acres.	Population Estimated to middle of 1896.
UPPER DISTRICT,	159,518	19,856 (includes Burgh of Stranraer.)
LOWER DISTRICT,	151,225	14,933 (includes Burghs of Newton - Stewart, Wigtown, and Whithorn.
COUNTY,	310,743	34,789.

BIRTHS AND BIRTH RATES.

The total number of Births registered during the year is 998, equivalent to a rate of

28·7 per 1000

of population for the County, as compared with 26·9 last year, and 26·5 in 1894.

In the Upper District the rate was 28·3

„ Lower „ „ 29·1

The illegitimate births were 14·5 per cent. of the total, or exactly double the rate for Scotland. The position of the county in regard to illegitimacy being peculiar, I have thought it worth while, at considerable pains, to work up the statistics of forty years with a view to determine whether all parts of the county are alike. If remedies are to be applied for a disease it goes without saying that the first thing to do is to focus the exact seat of the disease. The subjoined table will show that while every parish or registration district in the county has an illegitimacy rate far in excess of what prevails over Scotland as a whole, some are persistently worse than others, and it will be noted that those districts which contain the two largest towns, viz., Stranraer and Newton-Stewart, are by no means the greatest offenders. All the figures are proportioned to 1000 total births so that each district can be compared at a glance with every other and with itself, during each successive quinquennium, starting with the year 1856.

The figures may be commended to those who are desirous of taking a hand in the moral regeneration of the people, and perhaps they cannot do better than make a commencement with the parishes of Portpatrick and Kirkcowan, where the illegitimate are seldom less than 20 per cent. of the total births.

It will be observed that while illegitimacy is steadily on the decline in Scotland, nothing of the kind is apparent in Wigtownshire. The comparatively low figures for the first quinquennium (1856-60) are somewhat significant, as pointing in all probability to many illegitimate births having escaped notice in those early years of registration.

FORTY YEARS' ILLEGITIMACY IN WIGTOWNSHIRE.

Table showing quin-quennial averages of *Illegitimate Births per 1000 total births* since 1856; also average for the 30 year period, 1856-85, in each of the Registration Districts.

REGISTRATION DISTRICTS.		1856-60	61-65	66-70	71-75	76-80	81-85	86-90	91-95.
Glaserton...	...	86	117	236	231	174	155	167	237
Inch...	...	110	129	145	116	126	116	123	166
Kirkcubbin...	...	101	195	179	230	169	143	168	123
Kirkcowan...	...	200	233	200	190	188	158	195	231
Kirkinner...	...	82	172	128	168	164	180	149	151
Kirkmaiden...	...	150	187	183	147	105	177	158	186
Leswalt...	...	78	130	138	142	127	161	129	165
Mochrum...	...	170	176	166	170	202	172	176	202
New Luce...	...	158	140	273	203	215	60	175	224
Old Luce...	...	168	180	140	203	176	193	177	166
Penninghame...	...	152	128	150	137	132	129	138	103
Portpatrick...	...	203	215	182	204	191	192	198	209
Sorbie...	...	93	137	166	149	154	156	142	152
Stoneykirk...	...	120	139	179	197	186	185	168	153
Stranraer...	...	165	135	166	155	130	168	153	124
Whithorn...	...	137	163	155	167	166	174	160	185
Wigtown...	...	117	139	142	142	141	169	142	180
Whole County...	...	139	156	167	168	155	162	159	162
All Scotland...	...	88	97	98	91	85	82	90	74

DEATHS AND DEATH RATES.

The deaths in or appertaining to the County for 1896 numbered 580.

Lower District, ...	...	...	...	252
Upper District, ...	...	...	...	328

These figures give the following rates per 1000 living.

Lower District, ...	...	...	...	16·8
Upper District, ...	...	...	...	16·5

Whole County, ...	...	...	...	16·6
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The death rate over the whole county is greatly below that of 1895, which was 19·5. This very striking difference is accounted for by the widely different character of the weather of those years, principally of the winter and spring months. Whereas 1895 was one of the coldest, 1896 was one of the mildest years on record, and two such years having happened to fall in sequence there is afforded us an excellent illustration of the all-powerful influence of temperature on mortality. In 1895 the death rate for all Scotland mounted up to 19·7, a figure higher than any recorded for years, while it fell in 1896 to 16·9, which is the lowest death rate since registration was first begun, more than 40 years ago, and which may safely be said to be the lowest Scotland has ever known.

Eliminating the Burghs of Newton-Stewart, Wigtown, and Whithorn from the Lower District, and Stranraer from the Upper, we get the following death rates for the rural population:—

Lower District, ...	...	...	...	14·6 per 1000.
Upper „	...	...	...	15·7 „
County, ...	...	...	...	15·2 „

These figures are very satisfactory, and closely approximate the Scottish mainland rural death rate for the year, which was 14·9.

The Burghs give the following rates:—

Newton Stewart, ...	...	...	...	22·4
Wigtown, ...	...	...	...	21·2
Whithorn, ...	...	...	...	20·9
Stranraer, ...	...	...	...	18·2

In the case of towns with small populations a few deaths more or less one year than another will produce violent fluctuations in the death rate, and no inference should be drawn, except from averages over a series of years. One thing, however, death rates

always make abundantly clear, and it is that the more purely rural, or, as I have heard an old woman put it, "the nearer they live to the grund," the more healthy are the people.

TABLE CONTRASTING DEATH-RATES OF 1893-94-95-96.

DISTRICT.	Year.	General Death-Rate.	Infantile Death-Rate. Number of deaths per 1000 births.	Zymotic Death-Rate.	Tubercular Death-Rate.
LOWER... ..	1893	19.0	120	2.458	2.343
	1894	17.2	100	1.413	2.623
	1895	19.5	138	1.658	3.184
	1896	16.8	96	.937	2.343
UPPER... ..	1893	16.9	93	1.776	2.343
	1894	16.4	104	1.745	1.645
	1895	19.5	107	2.905	1.702
	1896	16.5	89	1.359	1.812

This table gives a bird's eye view of the health of the county during the last four years, and it will be observed that in 1896, there has been a marked improvement under every head.

The following are the principal causes of Deaths registered :—

	LOWER DISTRICT.	UPPER DISTRICT.	TOTAL.
Diphtheria, - - -	1	16	17
Scarlet Fever, - - -	5	2	7
Enteric Fever, - - -	0	4	4
Whooping-cough, - - -	1	1	2
Measles, - - -	0	0	0
Diarrhœa, - - -	7	4	11
Septic Diseases, - - -	3	3	6
Tubercular Diseases—			
Phthisis, - - -	23	29	52
Other than Phthisis,	12	7	19
Cancer, - - -	22	18	40
Diseases of Nervous System,	30	29	59
Diseases of Circulatory System,	23	47	70
Diseases of Respiratory System,	34	45	79
Other Causes, - - -	91	123	214
	252	328	580

TABLE II

DENSITY OF POPULATION, BIRTH RATE, INFANTILE AND OTHER DEATH RATES.

Names of Districts.	Persons to the Acre.	Birth Rate.	Deaths under 1 year per 1000 Births.	DEATH RATES PER THOUSAND, FROM														
				The Principal Zymotic Diseases.														
				All Causes.	Total.	Diphtheria.	Scarlet Fever.	Enteric and other or doubtful Fevers.	Measles.	Whooping Cough.	Diarrhoea.	Septic Diseases.	Phthisis.	Other than Phthisis.	Cancer.	Diseases of Nervous System.	Diseases of Circulatory System.	Diseases of Respiratory System.
Lower.	·098	29·19	96·1	16·87	·937	·066	·334	...	...	·066	·468	·200	1·540	·803	1·473	2·009	1·540	2·276
Upper.	·124	28·30	89·2	16·51	1·359	·805	·100	·201	...	·050	·201	·151	1·460	·352	·906	1·460	2·367	2·266

TABLE III.

CASES OF INFECTIOUS DISEASES COMING TO THE KNOWLEDGE OF THE

MEDICAL OFFICER DURING YEAR 1896

NAMES OF DISTRICTS.	Smallpox.	Diphtheria.	Erysipelas.	Scarlet Fever.	Typhus Fever.	Enteric Fever.	Continued Fever.	Puerperal Fever.	Measles.	Whooping Cough.	TOTAL CASES.
LOWER, ...	..	20	8	139	..	34	..	..	..	..	201
UPPER, *	..	12	3	59	..	5	..	1	..	..	80
Total of County, ...	..	32	11	198	..	39	..	1	..	..	281
- Cases removed to Hospital, ...	..	..	..	..	..	..	..	..	..	..	..
Percentage of Cases Removed to Hospital, ...	..	..	..	..	..	..	..	..	..	..	..

* For 10 months. Notification Act adopted 1st March, 1896.

UPPER DISTRICT—PARISH TABLES, 1896.

	Diphtheria.	Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Total.
Inch	3	...	...	...	2	...	5
Kirkcolm	3	1	...	7	...	...	11
Kirkmaiden	...	...	...	...	1	...	1
Leswalt	...	...	1	2	...	...	3
New Luce	...	...	...	...	...	...	...
Old Luce	1	..	2	50	1	...	54
Portpatrick	3	1	...	...	1	1	6
Stoneykirk	...	...	...	...	...	...	...
Stranraer	...	...	...	...	...	...	...
	10	2	3	59	5	1	80

Cost of Notifications—80 @ 2s 6d, £10 0 0.

UPPER—MONTHLY TABLE OF NOTIFICATIONS.

	Diphtheria.	Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal Fever.	Total.
January	...	..	...	...	...	...	...
February	...	...	...	...	...	...	...
March	2	...	...	...	...	...	2
April	1	...	...	2	...	1	4
May	...	...	...	...	1	...	1
June	...	...	...	...	2	...	2
July	...	...	...	1	...	...	1
August	...	...	...	10	...	...	10
September	...	...	1	14	1	...	16
October	...	2	1	19	...	...	22
November	3	...	...	9	...	...	12
December	4	...	1	4	1	...	10
	10	2	3	59	5	1	80

LOWER DISTRICT PARISH TABLES, 1896.

	Diphtheria.	Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal.	Total.
Glasserton	...	...	1	2	...	...	3
Kirkcowan	...	...	...	46	...	...	46
Kirkcinner	1	...	1	4	...	...	6
Mochrum	1	...	2	11	6	...	20
Penninghame	...	1	2	15	...	...	18
Sorbie	14	...	...	6	...	...	20
Whithorn	1	...	...	7	...	...	8
Wigtown	1	...	...	4	...	...	5
Newton-Stewart Burgh ...	1	...	2	44	28	...	75
	19	1	8	139	34	...	201

Cost of Notifications—201 @ 2s 6d, £25 2s 6d.

LOWER—MONTHLY TABLES OF NOTIFICATIONS.

	Diphtheria.	Croup.	Erysipelas.	Scarlet Fever.	Enteric Fever.	Puerperal.	Total.
January	...	...	1	10	1	...	12
February	3	...	...	3	1	...	7
March	...	...	1	12	...	...	13
April	1	1	1	16	1	...	20
May	1	...	...	34	...	...	35
June	1	...	1	22	18	...	42
July	...	...	...	10	5	...	15
August	...	...	1	15	5	...	21
September	11	...	1	8	2	...	22
October	1	...	...	6	...	...	7
November	...	...	1	3	1	...	5
December	1	...	1	...	...	...	2
	19	1	8	139	34	...	201

APPENDIX.

ADDITIONAL BYE-LAWS

MADE BY

The Lower and Upper District Committees of the County Council
of the County of Wigtown, for Regulating the Duties
of the District Medical Officer and District Sanitary
Inspector.

I.—DISTRICT MEDICAL OFFICER.

1. On receiving information of the occurrence of any contagious, infectious, or epidemic disease within the district, the Medical Officer shall, when necessary, visit the spot, and inquire into the causes and circumstances thereof, and advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and, so far as he may be able, assist in the execution of the same.

2. When a certificate has been received from a medical practitioner in terms of section 3 (1) (b) of the Infectious Disease (Notification) Act, the Medical Officer shall forthwith send or hand such certificate to the Sanitary Inspector, and shall instruct him to make the necessary inquiries, and to attend without delay to the instructions given in the Bye-Laws of the Local Authority.

3. When notice has been received from a householder (head of a family, occupier, or any of the other persons defined in sections (1) (a) and 16 of the aforesaid Act) the Medical Officer shall ascertain whether a Medical Practitioner's certificate has also been received, and if so, shall deal with the case in terms of Bye-Law II. Where no certificate has been received, it shall be the duty of the Medical Officer to ascertain whether the case has been correctly notified, and to see that the necessary precautions are taken by the person notifying accordingly.

4. Where there is a hospital which belongs to the Local Authority, or to which the Local Authority are entitled to send patients, the Medical Officer shall inform the Medical Practitioner in attendance on the patient that the Local Authority are prepared, by removing the patient or otherwise, to co-operate with him to secure isolation and disinfection.

5. In the case of infectious disease occurring in any house (or other structure as defined by section 13 of the Act) in which

there are children of school age, the Medical Officer shall give intimation to the Clerk to the School Board, and to the head-master or mistress thereof, or where the children attend a private school, to the head-master or mistress thereof only.

6. It shall be the duty of the Medical Officer to enter all certificates received from Medical Practitioners in terms of section 3 (1) (b) of the Infectious Disease (Notification) Act, and all notices received from householders (head of a family, occupier, or any of the other persons defined in sections 3 (1) (a) and 16 of the aforesaid Act) in a book to be provided by the Local Authority, and to be called the "Register of Notifications," which shall be kept by the Medical Officer.

7. The Medical Officer shall also keep any other books or forms in connection with the Infectious Disease (Notification) Act which the Local Government Board or the Local Authority may from time to time consider necessary, and shall, on or before the fourteenth day of January, annually transmit to the Clerk to the Local Authority a statement of the certificates and notifications received, in terms of the said Act during the preceding year, and of the fees due Medical Practitioners therefor.

8. The Medical Officer shall tabulate monthly the notifications received, and shall report yearly to the Local Government Board, giving a summary of the action taken by the Local Authority for preventing the spread of infectious disease. He shall also supply the information required on forms to be supplied by the Local Government Board. A copy of the Medical Officer's report and of the tabular statements shall be transmitted to the County Council in terms of section 53 of the Local Government Act.

9. The Medical Officer shall, within one month after the last day of each of the months of March, June, September, and December, transmit to the Local Authority an abstract of the certificates and notifications in terms of the Infectious Disease (Notification) Act, and of the mortality returns, received during the three months ending on these dates, and a report of, and with reference to, the sanitary state of the district, and generally with such other matters as he may consider it desirable to report upon to the Local Authority, or with reference to which the Local Authority may from time to time wish to be informed.

II.—DISTRICT SANITARY INSPECTOR.

1. When a certificate has been received from a Medical Practitioner, in terms of section 3 (1) (b) of the Infectious Disease (Notification) Act, the Sanitary Inspector shall make the necessary inquiries, attend to the instructions given, and report the result of his enquiries and proceedings to the Medical Officer.

2. Where a patient has not been removed to a hospital, the Sanitary Inspector shall at once proceed to examine the sanitary arrangements of the house from which the patient has been removed, and shall carry out any process of disinfection that may be required to prevent the spread of the disease, communicating, if necessary, with the Medical Officer with the view of securing his assistance.

3. Where the patient has not been removed to a hospital, the Sanitary Inspector shall forthwith visit the house in which the patient resides, that he may co-operate, if necessary, with the Medical Practitioner in attendance in securing isolation, disinfection, &c. He shall ascertain from the Medical Practitioner when the thorough examination of the sanitary arrangements of the house can with safety to the patient be carried out, and shall then proceed as in Bye-Law II.

4. Where the patient is a pauper the Sanitary Inspector shall, without delay, communicate with the Inspector of Poor.

5. In the event of a death occurring, the Sanitary Inspector shall see that proper precautions are taken by speedy interment to prevent the spread of infection.

6. The Sanitary Inspector shall, within fourteen days after the last day of each of the months of March, June, September, and December, transmit to the Local Authority a report of, and with reference to, the sanitary state of the district, the duties performed by him and his assistants during the preceding three months, in terms of the Public Health and other Acts administered by the Local Authority and relative Regulations and Bye-Laws, and generally with reference to such other matters as he may consider it desirable to report upon to the Local Authority, or with reference to which the Local Authority may from time to time wish to be informed. He shall also specify in these quarterly

reports the measures which, in his opinion, shall be adopted for the improvement of the sanitary condition of the district.

Wigtown, 6th October, 1896.

The foregoing Bye-Laws approved by the Local Government Board, 8th February, 1897.

NOTE.—Bye-Law No. 5, for M.O., of the Bye-Laws made in September, 1893, has been rescinded.

COUNTY OF WIGTOWN.

It is the duty of every individual to do what he can to prevent the spread of Infectious Disease. A copy of this paper will be left by the Sanitary Inspector in each house he visits. The Instructions, together with those given by the Medical Attendant, having the same object in view, should be carefully observed by Parents and others.

INSTRUCTIONS to be observed in dealing with cases of Infectious or Contagious Disease, such as Scarlatina, Diphtheria, Typhoid Fever, &c.

1. As soon as illness appears, separate the sick person from the rest of the family, placing him in a room as much as possible out of their way. An upper room is best. First remove all unnecessary articles of Furniture, such as Carpets, Curtains, Stuffed Chairs, &c., so as to render subsequent disinfection more easy. Keep a fire lighted to promote ventilation, and admit fresh air to the sick room, if weather permits, by opening the upper sash of the window. The more air that passes through the house, and especially through the sick room, the less likely is the disease to spread. Draught may be prevented by tacking fine muslin to the window frame.

N.B.—Where a Hospital is provided by the Local Authority, it should be taken advantage of, as offering far better facilities for treatment of the patient than can usually be obtained at home, greater safety to the other members of the family, and greater protection to the public.

2. No child should be allowed to attend school from a house where an infectious disease exists until a certificate has been received from the Medical Attendant, stating that he or she can do so without risk of conveying Infection to others. No teacher should admit children into school from infected houses without this Certificate.

3. Friends and neighbours ought to avoid entirely the practice of visiting from house to house when Infectious Disease exists in the neighbourhood, as Infection is often carried in this way.

4. A sheet should be hung up outside the door of the sick room, and kept moist with a solution of Izal (2 wine glassfuls to a gallon of water) or Carbolic Acid of same strength, or other appropriate Disinfectant. The floor should be frequently sprinkled with the same, or some other Disinfectant, and a tub or pail, half-filled with a similar solution, should be kept in a corner of the room for the reception of the patient's bed and body linen.

N.B.—In necessitous cases Disinfectants will be supplied gratis by the Sanitary Inspector.

5. Everything that passes from the patient should be received in vessels containing a Disinfectant as above. The disinfected discharges should not be thrown on the ash-pit, but put down the W.C., or buried in a hole in the ground away from any well or stream used for water supply.

N.B.—This precaution is most important in Typhoid, or, as it is sometimes called, Gastric or Enteric Fever, and the Discharges should be well mixed with plenty of Disinfectant before being disposed of.

5. All Cups, Glasses, Spoons, &c., used by the sick person should be either rinsed out with a Disinfectant Solution, and afterwards with hot water, or plunged in boiling water.

7. All Bed and Body Linen taken from the patient should be put in a tub prepared for its reception, and steeped for one or two hours before washing.

8. Instead of handkerchiefs, small pieces of rag should be used, and these, when soiled, should be immediately burned.

N.B.—This precaution is especially applicable in Diphtheria, Scarletina, Measles, and Consumption.

9. The sick room should not be entered by any person except those in immediate attendance on the sick. Persons attending on the sick should wear dresses of cotton, or of such material as may be easily washed and Disinfected. They should keep their hands scrupulously clean, washing them with Disinfectant soap, or in water with a little Izal or Condy's Fluid, especially before eating.

10. As the scales and dusty powder which peel from the skin in Scarlet Fever, Measles, and Small-pox are highly Infectious, the utmost care should be taken to prevent their escape by rubbing the body of the sick person all over every day with Sweet Oil or Vaseline. As soon as well enough, the patient should have a warm bath every other day, until four or five have been taken Carbolic Soap should be freely used, and the surface of the body well rubbed. When the peeling has entirely ceased, and the skin is perfectly smooth (and not until then), the patient may be allowed to mix with the rest of the family, the greatest care being taken that the patient does not wear any of the clothes used during the time of illness, or in any way exposed to Infection.

N.B.—The public are reminded that the danger of Infection lasts for a long time after the patient has apparently recovered. In Scarletina the Infection lasts from six to eight weeks, and in Typhoid Fever, Diphtheria, &c., it is so varied and uncertain, that the only safe course is to be guided by the Medical Attendant.

11. Anyone attending as a nurse upon a case of Erysipelas, Scarlet Fever, or Puerperal Fever, must not visit any other woman at or near her confinement, as there is the greatest danger of Infection being conveyed from one to the other through the nurse. Before she can again safely attend a confinement, the

nurse ought to thoroughly Disinfect herself and all her clothes, and allow one month to elapse.

12. To prevent any risk of conveying the infection of Erysipelas, any one dressing such a case should immediately thereafter wash his or her hands in some Disinfectant (*e.g.*, Carbolic Acid Solution, &c.)

13. Lying-in women are extremely ready to take Scarlet Fever, and generally die when they do take it. Therefore, whenever Scarlet Fever appears in a house where a woman is about to be or has recently been confined, the case should be sent to Hospital, or the woman removed elsewhere. Midwives ought to avoid all contact with this fever.

DISINFECTION OF PREMISES.

14. When the sickness has terminated, or the patient has been removed to Hospital, the sick room and its contents should be Disinfected and cleansed. This should be done in the following manner ;—Spread out and hang upon lines all articles of Clothing and Bedding ; well close the fireplace, windows, and all openings ; then take a pound of Brimstone, broken into small pieces, or Flowers of Sulphur ; put them into an iron dish, supported over a pail of water, and set fire to the Brimstone by putting live coals upon it. Close the door, and stop all crevices, and allow the room to remain shut up for twenty-four hours. The room should then be freely ventilated by opening the doors and windows, the paper (if any) should be stripped from the walls, the walls and ceiling whitewashed, and the furniture, and all wood and painted work, well washed with soap and water, containing a little Chloride of Lime. Beds, Mattresses, Carpets, and articles which cannot well be washed, should be taken out and thoroughly beaten and exposed to the air and sun. If these articles are much soiled, or of little value, they should be burned. Until this process of Disinfection is effectually carried out, the room cannot be safely occupied.

15. In case of death, the body should be put in a coffin as soon as possible, with a pound or two of Carbolic Powder. The coffin should be fastened down, and the body buried without delay.

Attention is particularly directed to the following provisions of the Sanitary Laws in reference to Infectious Diseases:—

1. The Owner or Occupier may be required to cleanse and disinfect any house or room, and the articles contained in it likely to retain Infection where Infectious Disease has existed, under a penalty not exceeding £1 a day for neglect.

2. Any person who lets a house, room, or part of a house, in which there has been Infectious Disease, without having such a house or room, and all articles therein liable to Infection, disinfected to the satisfaction of a qualified Medical Practitioner, is liable to a penalty not exceeding £20. This applies to Public Houses, Hotels, and Lodging Houses.

3. If any person suffering from any dangerous Infectious Disorder shall enter a cab or other public conveyance, without informing the driver thereof that he is so suffering, he shall be liable to a penalty not exceeding £5.

4. Any person suffering from any dangerous Infectious Disorder, such as Fever, Scarlet Fever, Small Pox, Measels, &c., who exposes himself in any street, public place, or public conveyance; and any person in charge of one so suffering, who exposes the suffering, shall be liable to a penalty not exceeding £5.

5. Any person who, without previous Disinfection, gives, lends, sells, transmits, or exposes any Bedding, Clothing, Rags, Books, Toys, or other things, which have been exposed to Infection, becomes liable to a penalty not exceeding £5.

N.B.—Any person who sells or transmits Milk or Productions which have been exposed to infection is liable to a heavy penalty. It is illegal for any person who suffers from Infectious Disease, or who has recently been in contact with a person suffering from Infectious Disease, to milk Cows, or to handle vessels used for containing Milk for sale, or in any way to take part or assist in the production, distribution, or storage of Milk for sale.

6.—If a patient is without proper lodging or accommodation, or if he is lodged in a room occupied by others besides those in attendance upon him, he may be removed to Hospital by warrant of a Sheriff or any Magistrate.

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